

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions of claims in the application:

Listing of Claims:

1. (Currently amended) A method for detecting an unbound form of a first member of a binding pair in a sample containing both the unbound form and a bound form of the first member, the method comprising the steps of:

- (a) providing a first particle bound to a second member, the second member comprising C4b-binding protein (C4BP) or a fragment of C4BP that binds to protein S;
- (b) reacting the first particle bound to the second member with [[a]] the sample, wherein the second member binds to the unbound form of the first member in the sample thereby forming a first complex comprising the second member bound to the first particle and the first member;
- (c) providing into the sample a second particle bound to a third member, the third member comprising an antibody which specifically binds to the first member;
- (d) forming a second complex comprising the first particle, the second member, the first member, the third member and the second particle, wherein the third member bound to the second particle binds to the first member in the first complex and wherein the second member and the third member bind to different binding sites on the first member; and
- (e) detecting the formation of the second complex by measuring an increase of the turbidity of the sample thereby detecting the unbound form of the first member in the sample.

2. (Cancelled)

3. (Previously presented) The method of claim 1, wherein at least one of the first and second particles comprise latex.

4. (Cancelled)

5. (Original) The method of claim 1, wherein steps (a) through (d) are performed sequentially.

6. (Original) The method of claim 1, wherein steps (a) through (d) are performed simultaneously.

7. (Previously presented) The method of claim 1, wherein detecting the formation of the second complex is quantitated.

8. (Previously presented) The method of claim 1, wherein the first member comprises protein S.

9. (Cancelled)

10. (Previously presented) The method of claim 1, wherein the sample is selected from the group consisting of blood, plasma, serum, saliva, cerebro-spinal fluid (CSF), urine, culture media, a cell suspension, a buffer and an artificially prepared fluid containing the first member.

11. (Original) The method of claim 1, wherein the second member binds to the first member at a single binding site.

12. (Original) The method of claim 11, wherein the third member binds to the first member at a single binding site which is different from the single binding site to which the second member binds.

13. (Original) The method of claim 1, wherein step (b) is performed within 0 to about 180 seconds.

14. (Currently amended) The method of claim 1, wherein the molar ratio of the third member [[and]] to the second member is between about 2 and 20.

15. (Currently amended) The method of claim 1, wherein the molar ratio of the third member [[and]] to the second member is between about 5 and 10.

16. (Previously presented) The method of claim 1, wherein the third member is present in an amount that is higher than an amount of the unbound form of the first member in the sample.

17. (Currently amended) The method of claim 1, wherein the molar ratio of the third member [[and]] to the unbound form of the first member in the sample is between about 10 and 40.

18. (Previously presented) A composition or a kit for detecting an unbound form of a first member of a binding pair in a sample containing both the unbound form and a bound form of the first member, the binding pair comprising the first member and a second member, the composition or the kit comprising:

a first particle bound to the second member;

a second particle bound to a third member, the third member being different from the second member and capable of binding to the first member at a binding site different from the second member, and wherein the second member and the third member do not bind to each other;

wherein the first member comprises protein S, the second member comprises C4BP or a fragment of C4BP that binds to protein S, and the third member comprises an antibody; and wherein the first and the second particles, when agglutinated, are capable of causing an increase of the turbidity of the sample.

19-21. (Cancelled)

22. (Currently amended) The composition or the kit of claim 18, wherein the third member binds to the first member at a single binding site which is different from the [[single]] binding site to which the second member binds.

23-31. (Cancelled)

32. (Previously presented) A method for diagnosing thrombophilia comprising performing the method of claim 8, and further comprising comparing the amount of the second complex formed

Amendment and Response After Final

Submitted: June 16, 2008

Application No. 10/022,481

Attorney Docket No. INL-048

Page 5 of 13

in the sample to the amount of the second complex formed in a sample derived from an individual without thrombophilia, wherein thrombophilia is diagnosed if the amount of the second complex formed in the sample is less than the amount of the second complex formed in the sample derived from an individual without thrombophilia.

33. (Cancelled)

34. (Previously presented) The composition of claim 18, wherein the sizes of the first particle and the second particle range from about 50 nm to about 1000 nm.

35. (Previously presented) The composition of claim 18, wherein the sizes of the first particle and the second particle are different.